

# TRANSMITTAL FORM

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Application Number

09/362,504

Filing Date

July 27, 1999

First Named Inventor

Ravi, K. V.

Art Unit

1763

Examiner Name

Rudy Zervigon

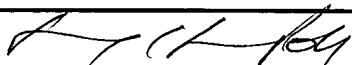
Attorney Docket Number

A1126/T08910

## ENCLOSURES (Check all that apply)

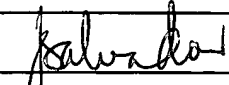
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## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

|              |   |          |        |
|--------------|---|----------|--------|
| Firm Name    | Townsend and Townsend and Crew LLP  |          |        |
| Signature    |  |          |        |
| Printed name | Chun-Pok Leung  |          |        |
| Date         | April 21, 2006  | Reg. No. | 41,405 |

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| Typed or printed name | Joy Salvador  | Date | April 21, 2006 |



PATENT  
Attorney Docket No.: A1126/T08910  
TTC No.: 016301-008910

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of:

KRAMADHATI V. RAVI *et al.*

Application No.: 09/362,504

Filed: July 27, 1999

For: METHOD FOR REDUCING THE  
INTRINSIC STRESS OF HIGH  
DENSITY PLASMA FILMS

Examiner: Rudy Zervigon

Art Unit: 1763

**APPELLANT'S REPLY BRIEF UNDER  
37 CFR § 1.193(b)(1)**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In response to the Examiner's Answer mailed on February 23, 2006 to the Appeal Brief filed on November 28, 2005, Applicants respectfully request the Board of Patent Appeals and Interferences to consider the following remarks.

ARGUMENTS:

A. The Examiner Ignores the Specific Teaching in Onuki et al. of Terminating the Sputtering Power During Application of the Bias Voltage

In the Appeal Brief, Applicants establish that Onuki et al. does not anticipate claim 16 and does not, alone or in combination with other references, render the other claims unpatentable because Onuki et al. does not teach or suggest maintaining a plasma by coupling sputtering energy into the processing chamber to deposit a first layer of a film on a substrate by sputtering without biasing the plasma toward the substrate and, thereafter, maintaining the plasma by maintaining coupling of the sputtering energy into the chamber and biasing the plasma toward the substrate to deposit a second layer of the film over the first layer. Onuki et al.

specifically discloses terminating the sputtering power during application of the bias voltage, so that it does not maintain coupling of the sputtering energy during biasing of the plasma to deposit a second layer. This is demonstrated by the fact that there is no overlap between the bias voltage and the sputtering power in Figure 1b. The Examiner has not rebutted Applicants' assertion.

B. The Examiner Ignores the Claimed Invention But Instead Focuses on the So-Called Recursive Process

The Examiner states at page 5 of the Answer: "Clearly, Figure 1(a) can, at a glance, be quickly interpreted as a continuous process thus anticipating Applicant's invention, or at least, upon further reading of Onuki, be a process that can be conducted recursively (as suggested by Figure 1(b)) again meeting applicant's claimed invention as conveyed in the Examiner's final action."

Figure 1(a) of Onuki et al. shows conventional DC sputtering and conventional DC bias sputtering. The Examiner offers no basis for combining the two sputtering processes to form a continuous process anticipating the present invention. A proper rejection should be based on a proper understanding and interpretation of the reference, not a conclusory statement based on a quick glance.

Figure 1(b) shows switching bias sputtering as a process proposed in Onuki et al. The Examiner states that the recursive process again meets the claimed invention. The Examiner, however, fails to point out how Figure 1(b) shows maintaining a plasma by coupling sputtering energy into the processing chamber to deposit a first layer of a film on a substrate by sputtering without biasing the plasma toward the substrate and, thereafter, maintaining the plasma by maintaining coupling of the sputtering energy into the chamber and biasing the plasma toward the substrate to deposit a second layer of the film over the first layer, when the bias voltage and the sputtering power has no overlap at all.

C. The Examiner Offers a Partial Quote from Appeal Brief to Make Applicants Appear Unreasonable

At page 7 of the Answer, the Examiner states:

Because of the Examiner's citation of Boys et al as teaching Applicant's claimed elements, the Examiner does not understand Applicant's position of "The Examiner recognizes that Boys et al does not teach a controller or a memory storing a program" (Page 11 of brief).

The complete quote from the Appeal Brief is as follows:

The Examiner recognizes that Boys et al. does not teach a controller or a memory storing a program for directing the operation of the system to deposit a first layer without biasing of the plasma and a second layer with biasing of the plasma. The Examiner relies on Onuki et al. for allegedly disclosing the deposition of a first layer without biasing and a second layer with biasing.

Clearly, the point of the statement is not that Boys et al. does not teach a controller or a memory storing a program, but the point is that Boys et al. does not provide a program for directing the operation of the system to deposit a first layer without biasing of the plasma and a second layer with biasing of the plasma. For that feature the Examiner relies on Onuki et al.

D. The Examiner Mischaracterizes the Record with Regard to the Rejection of Claim 23 in Alleging that Applicants Misstated the Record

At page 8 of the Answer, the Examiner states:

In response, Applicants mis-state the Examiner's interpretation of apparatus features that the Examiner believes to be intended use. Nowhere in the rejection of article claims 23, 24, and 36 does the Examiner apply an intended use argument. See final rejection.

In the Final Office Action dated April 28, 2005, at page 21, the Examiner discusses claim 23, and states:

17. With respect to claim 23, . . .

. . .

The Examiner believes the sole difference between the claimed invention and the above-conveyed prior art is the lack of intended use in Applicant's product claim - " ... for reduction of mechanical stress in the second silicon oxide layer."

Therefore, the Examiner mischaracterizes the record when he states at page 8 of the Answer: "Only in Apparatus claims 17-22, and 25-31 does the Examiner apply intended use arguments directed to process gas and/or film identities. See the final rejection."

Applicants respectfully submit that the patentability of the claims is clearly established in the Appeal Brief. Applicants respectfully urge the Board to focus on the claimed features that are neither taught nor suggested by the cited references, and not be distracted by unsubstantiated allegations, conjectures, and speculations made by the Examiner.

CONCLUSION:

In view of the foregoing, Applicants respectfully submit that the claims are in condition for allowance, and respectfully request that the rejection of these claims be reversed.

Respectfully submitted,



Chun-Pok Leung  
Reg. No. 41,405

TOWNSEND and TOWNSEND and CREW LLP

Tel: (415) 576-0200

Fax: (415) 576-0300

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